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PATENT  
Attorney Docket No. 05725.0393-00

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: )  
David W. Cannell et al. ) Group Art Unit: 1615  
Application No.: 09/614,118 ) Examiner: H. Sheikh  
Filed: July 11, 2000 ) Confirmation No.: 1975  
For: THE USE OF C3-C5 MONOSACCHARIDES )  
TO PROTECT KERATINOUS FIBERS )  
)  
)  
)

**Attention: Mail Stop Appeal Brief-Patents**  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

Sir:

**REPLY BRIEF UNDER 37 C.F.R. § 41.41**

Pursuant to 37 C.F.R. § 41.41, Appellant presents this Reply to the Examiner's  
Answer dated June 22, 2007.

If any fees are required in connection with the filing of this paper that are not filed  
herewith, Appellants request that the required fees be charged to Deposit Account  
No. 06-0916.

**I. EVIDENCE RELIED UPON**

Applicants agree with the Examiner's indication of the evidence relied upon in the rejection of the claims under appeal.

**II. ARGUMENT**

**A. The Examiner Has Not Established A Prima Facie Case of Obviousness**

Despite the Examiner's assertions to the contrary, she has not established that the prior art provides some teaching or suggestion that would have motivated one of ordinary skill in the art to combine the references in the manner proposed. Rather, for the reasons provided below, the Examiner's attempt to rebut Appellants' arguments only strengthen Appellants' point, as well as demonstrate the Examiner's shortcomings for determining obviousness

In its recent decision in *KSR International Co. v. Teleflex Inc.*, No. 04-1350 (U.S. Apr. 30, 2007), slip op. at 2, the Supreme Court confirmed that the "framework for applying the statutory language of §103" was still based on its landmark decision in *Graham v. John Deere Co. of Kansas City*, 383 U.S. 1 (1966). Several basic factual inquiries must be made in order to determine the obviousness or non-obviousness of claims of a patent application under 35 U.S.C. § 103. These factual inquiries, set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), require the Examiner to:

- (1) Determine the scope and content of the prior art;
- (2) Ascertain the differences between the prior art and the claims in issue;
- (3) Resolve the level of ordinary skill in the pertinent art; and
- (4) Evaluate evidence of secondary considerations.

The obviousness or non-obviousness of the claimed invention is then evaluated in view of the results of these inquiries. *Graham*, 383 U.S. at 17-18, 148 USPQ 467; see also *KSR Int'l Co. v. Teleflex, Inc.*, No. 04-1350 (U.S. Apr. 30, 2007), slip op. at 2.

Thus, in order to satisfy the initial burden of establishing a *prima facie* case of obviousness, the Examiner must first show that the prior art references teach or suggest all the claim limitations. *In re Royka*, 490 F.2d 981, 180 USPQ 580 (CCPA 1974). The Examiner must also show that there is some suggestion or motivation, either in the references or in the knowledge generally available to one of ordinary skill in the art, to modify or combine the references. *In re Rouffet*, 149 F.3d 1350, 47 USPQ2d 1453 (Fed. Cir. 1998). In the *KSR* case, the Supreme Court recognized that a showing of "teaching, suggestion, or motivation" could provide helpful insight in determining whether the claimed subject matter is obvious under Section 103(a). *KSR*, slip op. at 14.

Additionally, the Supreme Court mandates that "[t]o facilitate review, this analysis [of whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue] should be made explicit." *Id.* (citing *In re Kahn*, 441 F.3d 977, 988 (Federal Circuit, 2006) ("[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness")).

Following the *KSR* decision, the Office issued a memorandum to its technology center directors on May 3, 2007, indicating that **"in formulating a rejection under 35 U.S.C. § 103(a) based upon a combination of prior art elements, it remains**

**necessary to identify the reason why a person of ordinary skill in the art would have combined the prior art elements in the manner claimed.”** (Emphasis in original).

**1. The Examiner continues to improperly combine the teachings of Wisotzki with either Buheitel or Naito.**

In her Answer, the Examiner argues that “[W]hile Wisotzki does not teach the step of heating at least 45°C as claimed, the Buheitel and Naito patents sufficiently remedy this deficiency of Wisotzki by their teaching of heating keratinous fibers to a temperature in the range of 30 to 55°C (Buheitel) and at a temperature of 40 to 160°C (Naito).” Examiner’s Answer at 10. Appellants’ continue to argue Buheitel and Naito do not remedy this deficiency because nothing in those references suggest that a heating step would be advantageous with respect to repairing split ends with a composition of Wisotzki. To support her contention, the Examiner merely asserts that “the Buheitel reference was relied upon for the teaching that it is well known in the art to employ higher temperatures when heating keratinous fibers, namely at temperatures encompassing 45°C or greater.” *Id.* Therefore, the Examiner continues to fail to provide articulated reasons or rational underpinning to support her conclusion as required by KSR.

The Examiner also overlooks the several distinctions in Wisotzki from the Appellants’ present claims. The Examiner alleges by “repairing” split ends, the compositions of Wisotzki causes repairing by means of increasing  $\alpha$ -structure and/or tensile strength of damaged keratinous fiber, as claimed. Applicant’s submit that the Examiner is improperly applying a broad definition to “repair.” It is a well settled tenant

of patent law that an Applicant may be his own lexicographer so long as the meaning given to a term is not repugnant to the term's well known usage. M.P.E.P. § 2111.02. Although the Examiner must interpret a claim as broadly as its terms allow, words of the claim must be give their plain meaning "unless the text of the patent makes clear that a word was used with a special meaning." M.P.E.P. § 2111.01. Here, Applicants have defined "repair" in the claim 30 as "increasing the  $\alpha$ -structure and/or tensile strength of the damaged keratinous fiber following treatment of the damaged keratinous fiber with said composition as compred to not treating the keratinous fiber with said composition," which is different from the teaching of Wisotzki. As such, Wisotzki does not teach protecting keratinous fibers from extrinsic damage or repairing a keratinous fiber following extrinsic damage.

**2. The Examiner inappropriately incorporates Koga with either Buheitel or Naito.**

The Examiner has not shown and cannot identify, as she is required to do, why one of ordinary skill in the art would have combined Koga with either Buheitel or Naito. Koga does not teach or suggest that it is desirable to heat a keratinous fiber during or after the application of the xylobiose-containing composition. In fact, Examples 1-6 disclosed in Koga describe preparations applied to the skin, as opposed to any keratinous fiber. Yet to remedy these deficiencies, the Examiner relies on the teachings of Buheitel or Naito to arrive at the claimed method. *Id.* at 17-18.

First, neither Buheitel or Naito is related to a composition for retaining moisture, as claimed in Koga, thus, the Examiner has inappropriately combined the references. *Id.* at 17. In her answer, the Examiner states, "Appellant's argument that Naito's

heating step is limited to methods using a permanent waving composition was not persuasive because Naito, nonetheless recognizes the step of heating hair by applying high temperatures that meet Appellant's claimed temperature (i.e., 45°C), *albeit, for a different purpose . . .* than that of the Appellant. . . (emphasis added)." *Id.* at 18. As acknowledged by the Examiner, the teachings of Naito are for a different purpose and there is no reason for the ordinary artisan to combine Naito to the teachings of Koga.

Second, the Examiner mistakenly equates the methods for reducing dryness of hair to give a natural oiliness, as disclosed in Koga, with a protective process for improving damaged hair as claimed by Appellants. *Id.* at 16. Koga merely provides a general teaching of retaining moisture by a composition that reduces the rate of water evaporation. See Koga col. 3-7, Examples 1 and 2. Koga is silent with regards to preserving a greater degree of or increasing  $\alpha$ -structure and/or tensile strength of the keratinous fiber. As a result, the teachings of Koga cannot render any pending claims obvious.

**3. The Examiner has not properly ascertained the differences between Syed in combination with Naito or Buheitel, and the claims in issue**

The Examiner continues to improperly pick and choose elements from Syed to support her obviousness position. Specifically, the Examiner alleges "Syed explicitly teach a method for reducing damages to hair during the lanthionizing process (see claim 1). Syed teaches that their representative sugars include glycerol, a C3 sugar alcohol." Examiner's Answer at 23. However, the Examiner fails to consider the reference *as a whole*. Syed merely teaches the use of "hydrogenated starch hydrolysate and/or a sugar." Col. 2, lines 21-27. Among the representative sugars listed

in col. 3, lines 5-8, only one sugar can be considered a C<sub>3</sub> to C<sub>5</sub> monosaccharide or derivative thereof.

Therefore, to arrive at the claimed invention, the skilled artisan would have to, first, choose a sugar from the “hydrogenated starch hydrolysate and/or a sugar.” Second, one would have to pick out the *single* C<sub>3</sub> to C<sub>5</sub> monosaccharide or derivative thereof taught by Syed, thereby ignoring the preferred embodiments of sucrose or sorbitol. Col. 3, lines 7-8. In fact, in Applicants’ specification, C<sub>3</sub> to C<sub>5</sub> monosaccharide or derivative thereof provide unexpectedly superior results compared to hexoses. See e.g., Tables 6-14. Finally, the skilled artisan would have to apply the Examiner’s secondary references, from a *non-analogous* art, for heating the keratinous fibers to at least 45°C. From this mental gymnastics, it is clear that the Examiner decided to pluck individual elements from the disclosures of Syed, Naito, and Buheitel only so much as will support her given position, to the exclusion of other parts necessary to the full appreciation what such references fairly suggest. Appellants respectfully submit that the Examiner has not established that skilled artisan would have been motivated to combine the cited references in the manner asserted so as to arrive at the claimed invention.

### III. CONCLUSION

The Examiner has failed to establish a prima facie case of obviousness at least because the cited references do not provide motivation for, or suggest the desirability of, their combination, as proffered by the Examiner. For the reasons given above, and argued in the previously submitted Appeal Brief, pending claims 30-56 are allowable. Thus, Appellant respectfully requests reversal of the Examiner’s rejection.

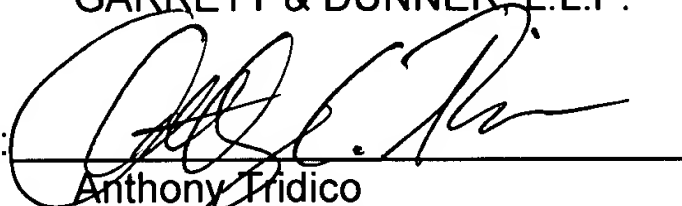
To the extent any extension of time under 37 C.F.R. § 1.136 is required to obtain entry of this Reply Brief, such extension is hereby respectfully requested. If there are any fees due under 37 C.F.R. §§ 1.16 or 1.17 which are not enclosed herewith, including any fees required for an extension of time under 37 C.F.R. § 1.136, please charge such fees to our Deposit Account No. 06-0916.

Respectfully submitted,

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Dated: August 10, 2007

By:

  
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